SASI ENGINEER-SAFE VALIDATION PACKAGE v1.0

Self-Accelerating Sympathetic Interface (SASI)

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Status: Phenomenological / Instrumentation-Focused

1. Scope and Purpose

This document defines a replication-ready experimental protocol for testing whether geometry-dependent acoustic coupling can produce a measurable change in apparent weight on a precision scale under tightly controlled conditions. No physical mechanism is assumed. This document makes no claims regarding gravity modification, over-unity behavior, vacuum energy extraction, new physics, or biological effects.

2. Phenomenological Equation

Delta_g / g = kappa * (u_ac / U_ref) * sigma_s

g = nominal local gravity (~9.81 m/s^2)
Delta_g = measured deviation in apparent weight
u_ac = acoustic energy density (J/m^3)
U_ref = 1 J/m^3 normalization
kappa, sigma_s = empirical dimensionless parameters

3. Physical Build Specifications

Overall footprint ~40 cm x 40 cm, height ~25–30 cm, mass ~8–12 kg excluding scale. Includes precision scale, isolation plate, three neodymium acoustic exciters, accelerometer, microphone, signal generator, amplifier, and heavy base mass.

4. Critical Geometry

Three exciters mounted in equilateral triangle geometry with 120-degree symmetry, facing upward, mounted through rubber isolation bushings to a rigid isolation plate, which is mounted to the scale via three rigid feet.

5. Test Protocol

Pattern Mode: 120-degree phase alignment.
Detuned Mode: 90-degree phase alignment.
Baseline recorded with power off. Runs performed under matched vibration conditions with randomized order. Scale readings, vibration RMS, SPL, and input power logged continuously.

6. Decision Criteria

If no statistically significant difference is observed between Pattern and Detuned modes under matched vibration, results are attributed to vibration artifact. If a repeatable difference appears only in Pattern mode, geometry-dependent coupling cannot be ruled out.

7. Statistical Treatment

Compute mean Delta_g per run, standard deviation, standard error, and 95 percent confidence intervals. Use paired comparisons between Pattern and Detuned runs. Differences below combined uncertainty are null results.

8. Claims Boundary

This document defines only an artifact-controlled experimental measurement protocol and asserts no physical mechanism.